

ASSIGNMENT 5

Textbook Assignment: "Link-11 Fault Isolation," chapter 5, pages 5-17 through 5-19 (continued); "Link-4A," chapter 6, pages 6-1 through 6-6; and "New Technology in Data Communications," chapter 7, pages 7-1 through 7-6.

- 5-1. When the operator enters PU 00 into the PU address field of the spectrum display, what effect, if any, will it have on the operation of the LMS-11?
1. 00 is an illegal address; therefore, no data will be displayed
 2. The LMS-11 will continuously update the display for each unit in the net
 3. The LMS-11 will update the display for NCS only
 4. No effect; the LMS-11 will continue to update the last legal address entered
- 5-2. Carrier suppression can only be tested when the Link-11 system is operating in which of the following modes?
1. Net Test
 2. Net Sync
 3. Roll call
 4. Broadcast
- 5-3. When reading the LMS-11 spectrum display, the technician notices that only the 605-Hz tone and the 2195-Hz tones are displayed. Which of the following setup entries would cause this display?
1. The RESTRICT field set to preamble only
 2. The RESTRICT field set to data only
 3. The PU field is set to a unit not in the net
 4. The SIDEBAND SELECT is set to USB only
- 5-4. The CDS computer outputs serial digital data to the Link-14A DTS.
1. True
 2. False
- 5-5. Link-4A is used to transmit which of the following types of information?
1. High-speed computer-to-computer tactical information
 2. Tactical information from a CDS ship to a non-CDS ship
 3. Aircraft control and target information
 4. All of the above
- 5-6. Link-4A data is transmitted by using which of the following methods?
1. Frequency-shift keying
 2. Phase-shift keying
 3. Audio frequency tone shift
 4. Quadrature differential phase-shift keying
- 5-7. What is the maximum number of aircraft that can be controlled by a single Link-4A controlling station?
1. 25
 2. 50
 3. 75
 4. 100
- 5-8. Aircraft control messages from the Link-4A controlling station are developed by the CDS computer using which of the following types of information?
1. Radar-derived target data
 2. Reply data from aircraft
 3. Other sources of tactical information
 4. All of the above
- 5-9. Link-4A uses which of the following frequency bands for data exchange?
1. HF only
 2. UHF only
 3. VHF only
 4. Both UHF and VHF

- 5-10. In which of the following Link-4A modes of operation is an aircraft directed to a specific location to be at an optimum position for an attack?
1. Precision course direction
 2. Automatic carrier landing system
 3. Air traffic control
 4. Intercept vectoring
- 5-11. In which of the following Link-4A modes of operation is used to maintain safe flight patterns and assigns priority for landing approach?
1. Precision course direction
 2. Automatic carrier landing system
 3. Air traffic control
 4. Intercept vectoring
- 5-12. Which of the following Link-4A modes of operation is used for the remote guidance of bombers, reconnaissance aircraft, and drones?
1. Precision course direction
 2. Automatic carrier landing system
 3. Air traffic control
 4. Intercept vectoring
- 5-13. In which of the following Link-4A modes of operation is used to land an aircraft on the flight deck of a carrier?
1. Precision course direction
 2. Automatic carrier landing system
 3. Air traffic control
 4. Intercept vectoring
- 5-14. The CAINS aircraft alignment data loaded into the navigation computer of the aircraft consists of which of the following types of data?
1. The latitude and longitude of the ship only
 2. The ship's velocity only
 3. The latitude, longitude, and ship's velocity
 4. The waypoint data
- 5-15. The CAINS alignment and waypoint data is initially loaded into the aircraft using which of the following methods?
1. Hard-wired deck edge outlet boxes only
 2. UHF RF transmission only
 3. Either hard-wired deck edge outlet boxes or UHF RF transmission
 4. HF transmission only
- 5-16. The standard CDS control message is (a)
(2), (14) milliseconds in duration, while the reply message is (b)
(14), (18) milliseconds in duration.
1. (a) 2 (b) 14
 2. (a) 2 (b) 18
 3. (a) 14 (b) 14
 4. (a) 14 (b) 18
- 5-17. The CAINS receive cycle duration is equal to what total number of milliseconds?
1. 2
 2. 4
 3. 14
 4. 18
- 5-18. The transmit frame is divided into what total number of 200 usec time slots?
1. 13
 2. 56
 3. 70
 4. 200
- 5-19. What total number of time slots make up the sync preamble of each transmit frame?
1. 13
 2. 42
 3. 56
 4. 70
- 5-20. What total number of transmit frame time slots contain message data bits?
1. 8
 2. 13
 3. 56
 4. 70

- 5-21. Which of the following transit frame signals causes the transmitter to turn off and starts the receive cycle?
1. Stop pulse
 2. Sync burst
 3. Guard interval
 4. Transmitter un-key
- 5-22. The reply message contains what total number of data time slots?
1. 13
 2. 42
 3. 56
 4. 70
- 5-23. Which of the following Link-4A test messages is used to provide aircraft with the means to verify proper operation of Link-4A?
1. The monitor reply message
 2. The monitor control message
 3. The universal test message
 4. All of the above
- 5-24. Which of the following Link-4A test messages causes internal testing of the data terminal set?
1. The monitor reply message
 2. The monitor control message
 3. The universal message
 4. All of the above
- 5-25. Which of the following AN/SSW-1() subassemblies provides system timing for Link-4A operations?
1. Digital-to-digital converter
 2. Monitor test panel
 3. Coordinate data transfer control
 4. Pulse amplifiers
- 5-26. Which of the following pieces of equipment is replacing older Link-11 data terminal sets?
1. AN/USQ-36 Data Terminal Set
 2. C2P
 3. AN/USQ-125 Data Terminal Set
 4. Link-16
- 5-27. The CP-2205 (P) (V)/USQ-125 processor board performs which of the following functions?
1. Modulation/demodulation
 2. Error detection and correction
 3. Radio set interface
 4. All of the above
- 5-28. Which of the following CP-2205 (P) (V)/USQ-125 components provides for communications with the CDS computer?
1. Processor board
 2. Interface board
 3. Power supply
 4. Modulator
- 5-29. The CP-2205 (P) (V)/USQ-125 is capable of data encryption.
1. True
 2. False
- 5-30. The single-tone waveform link capability of the CP-2205 (P) (V)/USQ-125 provides which of the following functions?
1. Interface with a satellite modem
 2. Increases UHF transmission range
 3. Increases HF transmission range
 4. Reduces HF propagation anomalies
- 5-31. Which of the following options of the CP-2205 (P) (V)/USQ-125 incorporates a routine to calculate the optimum frequency?
1. Enhanced link quality analysis
 2. Maximum useable frequency
 3. Single-tone waveform link
 4. Multi-frequency link
- 5-32. Which of the following options of the CP-2205 (P) (V)/USQ-125 transmits Link-11 data through a standard wire-line modem?
1. Enhanced link quality analysis
 2. Maximum useable frequency
 3. Single-tone waveform link
 4. Multi-frequency link

5-33. Which of the following options of the CP-2205 (P) (V)/USQ-125 incorporates most of the functions of the LMS-11?

1. Enhanced link quality analysis
2. Maximum useable frequency
3. Single-tone waveform link
4. Multi-frequency link

5-34. Which of the following options of the CP-2205 (P) (V)/USQ-125 improves Link-11 operations by using four frequencies simultaneously?

1. Enhanced link quality analysis
2. Maximum useable frequency
3. Single-tone waveform link
4. Multi-frequency link

5-35. The normal configuration of the multi-frequency link options uses (a)

(2) (3)

HF frequencies and (b)
(1), (2)

UHF frequencies.

- | | | | | |
|----|-----|---|-----|---|
| 1. | (a) | 2 | (b) | 1 |
| 2. | (a) | 3 | (b) | 1 |
| 3. | (a) | 2 | (b) | 2 |
| 4. | (a) | 3 | (b) | 2 |

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| <p>A. Radio echo test</p> <p>B. Loopback test 1</p> <p>C. Loopback test 2</p> <p>D. Loopback test 3</p> <p>E. Loopback test 4</p> <p>F. DTS fault isolation test</p> |
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FIGURE 4A.

IN ANSWERING QUESTIONS 5-36 THROUGH 5-40, SELECT FROM FIGURE 4A THE SYSTEM TEST OPTIONS OF THE CP-2205(P) (V)/USQ-125 DATA TERMINAL SET DESCRIBED IN THE QUESTION NOT ALL ITEMS IN THE LIST ARE USED.

5-36. This option is selected when a single station POFA is running without the radio.

1. A
2. B
3. C
4. D

5-37. When this test is run, the computer interface is disabled and a test message is repeatedly sent to the radio set.

1. A
2. B
3. C
4. D

5-38. This test is used to verify the operation of the computer interface, crypto device, and the data terminal interface circuits.

1. C
2. D
3. E
4. F

5-39. This test places the DTS in full-duplex mode to run a single station POFA with the radio.

1. A
2. B
3. C
4. D

5-40. This option performs an internal self-test of the DTS audio circuits.

1. A
2. B
3. C
4. D

- 5-41. The data terminal can be controlled from a remote location by use of which of the following pieces of equipment?
1. A 286 personal computer only
 2. A 386 or better personal computer only
 3. The C-12428/USQ-125 Control Unit only
 4. Either a 386 or better personal computer, or the C-12428/USQ-125 Control Unit

- 5-42. Link-16 uses which of the following communications protocols?
1. Netted or roll call
 2. Time division, command and response
 3. Time division multiple access
 4. Frequency-division multiplexing

- 5-43 1 Each unit participating in a Link-16 net is identified by assigning each unit what type of designator?

1. A PU number
2. A JU number
3. A link identifier
4. A hull number

- 5-44. What is the duration of each time slot in a Link-16 message?

1. 7.8125 msec
2. 7.8125 μ sec
3. 7.8125 seconds
4. It varies, according to the amount of data transmitted

- 5-45. During the transmission of data, exactly how often does Link-16 change frequency?

1. Every 13 μ sec
2. Every 13 msec
3. Daily
4. When the frequency is excessively noisy

- 5-46. Link-16 is configured for a stacked net. At-any one time, what number of nets can a single terminal transmit and receive data?

1. One
2. Two
3. Three
4. Four

- 5-47. A Link-16 data word is comprised of what number of data bits?

1. 50
2. 60
3. 70
4. 80

- 5-48. A Link-16 fixed format message is which of the following message types?

1. V-series
2. R-series
3. M-series
4. J-series

- 5-49. Which of the following message types are used for Link-16 voice communications?

1. Fixed format
2. Free text
3. Variable format
4. Unformatted

- 5-50. Which of the following message types are used to exchange tactical data?

1. Fixed format
2. Free text
3. Variable format
4. Unformatted